

MONTHLY WEATHER REVIEW,

DECEMBER, 1879.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to November 14th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 134 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 145 monthly journals and 145 monthly means from the former, and 13 monthly means from the latter; reports from 31 Sunset stations; 240 monthly registers from Voluntary Observers; 26 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of, Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is shown the general distribution of the atmospheric pressure for the month, as reduced to sea-level, by the isobaric lines. The mean pressure for the present month, when compared with the average for December of the past seven years, is higher for the Atlantic States, Lake region, Minnesota and eastern Dakota, being greatest for New England—from 0.11 to 0.22 of an inch. It is about normal for Florida and California. For the remaining sections it is generally lower, especially in the Rocky Mountain regions. It varies from 0.14 of an inch below on Pike's Peak to 0.19 at Virginia City.

Local Barometric Ranges.—These have been least in Florida, New Mexico and southern California. They have been greatest over the western portions of Kansas and Nebraska, northwestern Dakota, Lake Superior, Maine, Idaho, and northern California. By districts they are as follows: New England, 1.01 to 1.40 inch; Middle Atlantic States, 0.83 to 1.12 inches; Lower Lake Region, 1.08 to 1.20 inch; Tennessee and the Ohio valley, 0.74 to 1.05 inch; Upper Lake Region, 1.04 to 1.54 inch; Upper Mississippi valley, 1.08 to 1.34 inch; Red River of the North Valley, 1.19 to 1.40 inch; Lower Missouri valley, 1.43 to 1.45 inch; Upper Missouri valley, 0.95 to 1.54 inch; Eastern Rocky Mountain Slope, 0.70 to 1.60 inch; Virginia City, 0.94 inch; Salt Lake City, 1.29 inch; Winnemucca, 1.16 inch; Boise City, 1.34 inch; Portland, Or., 1.25 inch; Central Pacific Coast region, 0.95 to 1.37 inch; Los Angeles, 0.75 inch; New Mexico, 0.64 to 0.79 inch; Western Texas, 0.56 to 1.58 inch; Western Gulf States, 0.74 to 1.15 inch; Eastern Gulf States, 0.71 to 0.77 inch; South Atlantic States, 0.59 to 0.87 inch; Key West, 0.32 inch.

Areas of High Barometer.—Of these eleven are described. Nos. IV, IX and X are the most interesting on account of the low temperatures accompanying them, especially No. IX.

No. I.—On the 1st this high area approached the Northwest from British America. Its progress southward was prevented by low-pressure, No. II, then advancing eastward; in fact it was forced to remain north of the Lake region on the 2nd. North of Pembina the temperature fell below zero. During the afternoon of the 3rd the barometers at Chatham, N. B., and Sydney, C. B., rose to 0.55 and 0.56 in., respectively, above the normal. On the following day it disappeared over the Gulf of St. Lawrence in advance of low No. II.

No. II.—It advanced southeastward on the 4th toward the St. Lawrence valley, with its southwestern side covering the Lake region. Morning of the 5th it covered the lower St. Lawrence valley and New England; a. m. barometer at Quebec, 30.56 in., or 0.61 in. above the normal; midnight at Sydney, 0.71 above. During the 6th it passed eastward as low pressure No. III approached.